

CASE OF ARTERIO-VENOUS ANEURISM OF THE
AXILLARY ARTERY AND VEIN OF FOUR-
TEEN YEARS' DURATION.

By WILLIAM OSLER, M. D.,

PROFESSOR OF MEDICINE JOHNS HOPKINS UNIVERSITY, AND PHYSICIAN-IN-CHIEF TO
JOHNS HOPKINS HOSPITAL.

THE following case is worth placing on record, partly on account of its rarity, but more particularly on account of the long duration without serious symptoms, and the admirable illustration which it affords of the propriety of non-intervention in certain instances of aneurismal varix.

On December 28, 1888, I saw in Hamilton, Ont., with Dr. Malloch, H. B. T., aged twenty-five, who presented the following condition: He is a strong, healthy young man, with a fresh complexion, well developed muscles and a well-shaped thorax.

Inspection.—The apex beat of the heart is in the fifth interspace inside the nipple line. There is a slight fulness beneath the outer half of the left infra-clavicular space, and pulsation is seen in this region; there is also slight, but not nearly such marked, sub-clavicular impulse on the right side. The carotids do not throb visibly, but on the left side above the clavicle there is fullness in the lower cervical triangle, and a distinct impulse. The position and appearance of the left clavicle are normal. It is not elevated. There is perhaps slight fulness in the first intercostal space, near the sternum; there is no special prominence of the first rib, or of the manubrium sterni.

Palpation.—The cardiac impulse at the apex has moderate force; there is no thrill. There is no impulse upon the sternum, or beneath the inner half of the left infra-clavicular region. There is a very distinct impulse in the prominence above, referred to in the outer half, upon the clavicle itself, and upon the sub-clavicular fulness. There is a continuous vibratory thrill communicated to the hand, which is felt over the whole

region of pulsation, and the entire left side of the root of the neck. It is not felt on the right side, nor over the sternum, nor on the præcordia. There is no definite tumor to be felt either below or above the clavicle; the enlargements referred to are soft, and yield readily to pressure. High up in the axilla there is a fulness in the course of the artery. To the touch it does not give the sensation of a distinct tumor; there is a remarkable continuous thrill in this region which is obliterated here and in the subclavian region when the axillary artery is compressed. The left arm looks normal, the veins are not distended, the finger-nails are neither blue nor incurved, and the tips are not clubbed. The pulse in the left radial is not so strong as in the right; there is no perceptible retardation.

Percussion.—The cardiac dullness is normal. Percussion over the manubrium and on the inner half of the infra-clavicular region is clear; the outer half is distinctly resonant.

Auscultation.—The heart sounds are clear at apex and base. There is no special accentuation of the aortic second sound; no murmur in the right carotid, or in the right sub-clavian arteries. Over the outer half of the left infra-clavicular area, on the corresponding portion of the clavicle, over the lower cervical triangle from the sterno-mastoid border to the attachment of the trapezius there is a loud continuous *bruit*. This murmur is also heard with great intensity in the axilla, down the inner surface of the arm, and on the front and back of the fore-arm. It is very loud and distinct in the palm of the hand and in the finger tips. In all of these regions the murmur resembles an intense *bruit de diable*, or a venous hum at the root of the neck. At one point only, just below the clavicle, there is a slight systolic intensification of the murmur. Posteriorly the bruit is heard in the sub-scapular space and feebly upon the scapula. Subsequently, when the patient came under my care in Philadelphia, he was seen by Professor Ashhurst, who noticed that pressure upon the axillary artery high up in the arm-pit caused complete disappearance of the thrill and the murmur in the clavicular region. The diagnosis of arterio-venous aneurism was made.

The history of the patient is as follows: When fifteen years of age in running down a sloping grass plot he fell and forced a lead pencil, which was in his watch-pocket, into his side high up

in the axilla. When pulled out this was followed by a gush of blood, which instantly ceased. Shortly after, the arm began to swell and was subsequently black and blue to the wrist. His physician kept him in bed for two days and in the house for ten days with his arm in a sling. He does not seem after this to have had any special trouble. He has been accustomed to take a great deal of athletic exercise; rows in the summer, and has worked hard in the gymnasium during the winter months. He consulted Dr. Malloch for occasional pain in the lower portion of the chest and sleeplessness, but all this time he was keeping up his athletic sports and the condition above described was only discovered accidentally by Dr. Malloch, who stripped him to examine for the cause of the pain. He has had no serious interference with the use of the arm, but considered himself in perfect health. Since the discovery of the condition he has been somewhat nervous and uneasy and says that the pain has been aggravated.

The most careful examination of the axilla fails to discover the point at which the lead pencil entered. The patient was shown at a meeting of the College of Physicians in Philadelphia, in January, 1889, and the general opinion of the surgeons present was that, as the condition had lasted for so many years, and had not seriously interfered with the use of the arm, nothing should be done.

Unfortunately the friends of the patient became uneasy, and not satisfied with the opinions which had been given them, and he returned to the old country, and there sought advice in several quarters. In Dublin he very narrowly escaped operation, and even the day was set, but relying, as he said, on my strong statement, he, to use his own expression, escaped to London, where both Sir Joseph Lister and Sir Wm. Savory counselled non-interference, the former stating that life might not be curtailed at all by the affection, and that if at any time inconvenience arose, the artery might be tied above and below the orifice of communication.

I have heard from this patient within the last six months, and he continues well.

Arterio-venous aneurism of the axillary and sub-clavian vessels is rare. Bramann, in his exhaustive article, (Langen-

beck's Archiv. Bd. 33) was able to collect only ten cases. In several of these the condition lasted for a long time ; in one five ; another seven ; and in a third thirty-three years. In the latter, after persisting for all this length of time without anything more than slight painful sensations in the fingers, the left arm increased in volume, became œdematous, and the veins were distended, a condition which necessitated ligation of the sub-clavian artery.

In this case the lead pencil, in all probability, perforated the artery and vein high up in the axilla, and it is evident that the opening is in the axillary artery, and not in the sub-clavian, for the thrill and pulsation above and below the clavicle disappear when this vessel is compressed high in the arm-pit. The remarkable thrill and fullness in the sub-clavian triangle and the sub-clavian space is associated probably with distension of the sub-clavian vein and its branches. An interesting point in the purring murmur was its intense transmission to the peripheral vessels, and it could be heard loudly even in the finger tips.